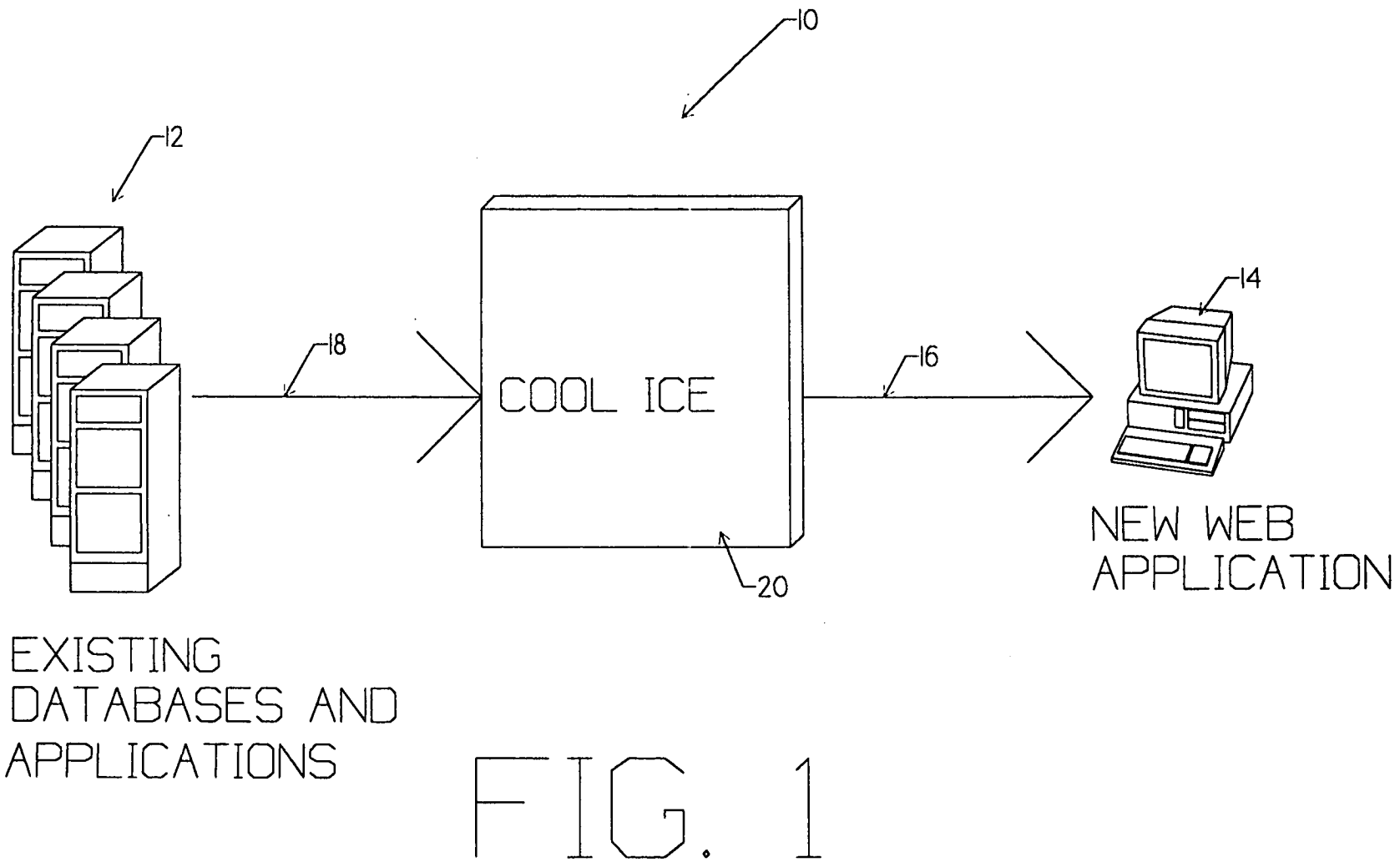
10
12
18
COOL ICE
16
14
20
NEW WEB
APPLICATION
EXISTING
DATABASES AND
APPLICATIONS

FIG. 1

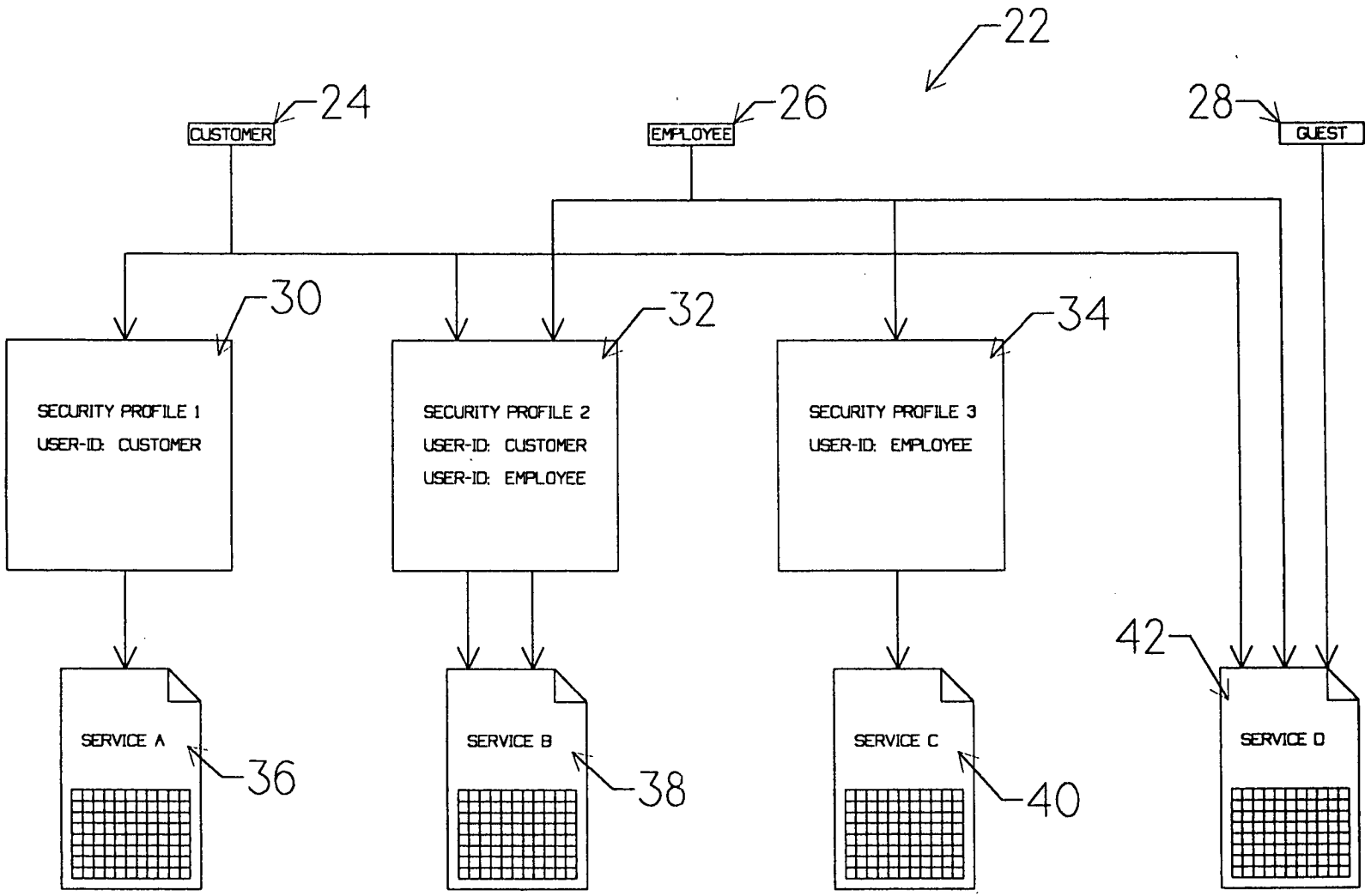
22
24
CUSTOMER
26
EMPLOYEE
28
GUEST
30
32
34
SECURITY PROFILE 1
USER-ID: CUSTOMER
SECURITY PROFILE 2
USER-ID: CUSTOMER
USER-ID: EMPLOYEE
SECURITY PROFILE 3
USER-ID: EMPLOYEE
42
SERVICE A
36
SERVICE B
38
SERVICE C
40
SERVICE D

FIG. 2

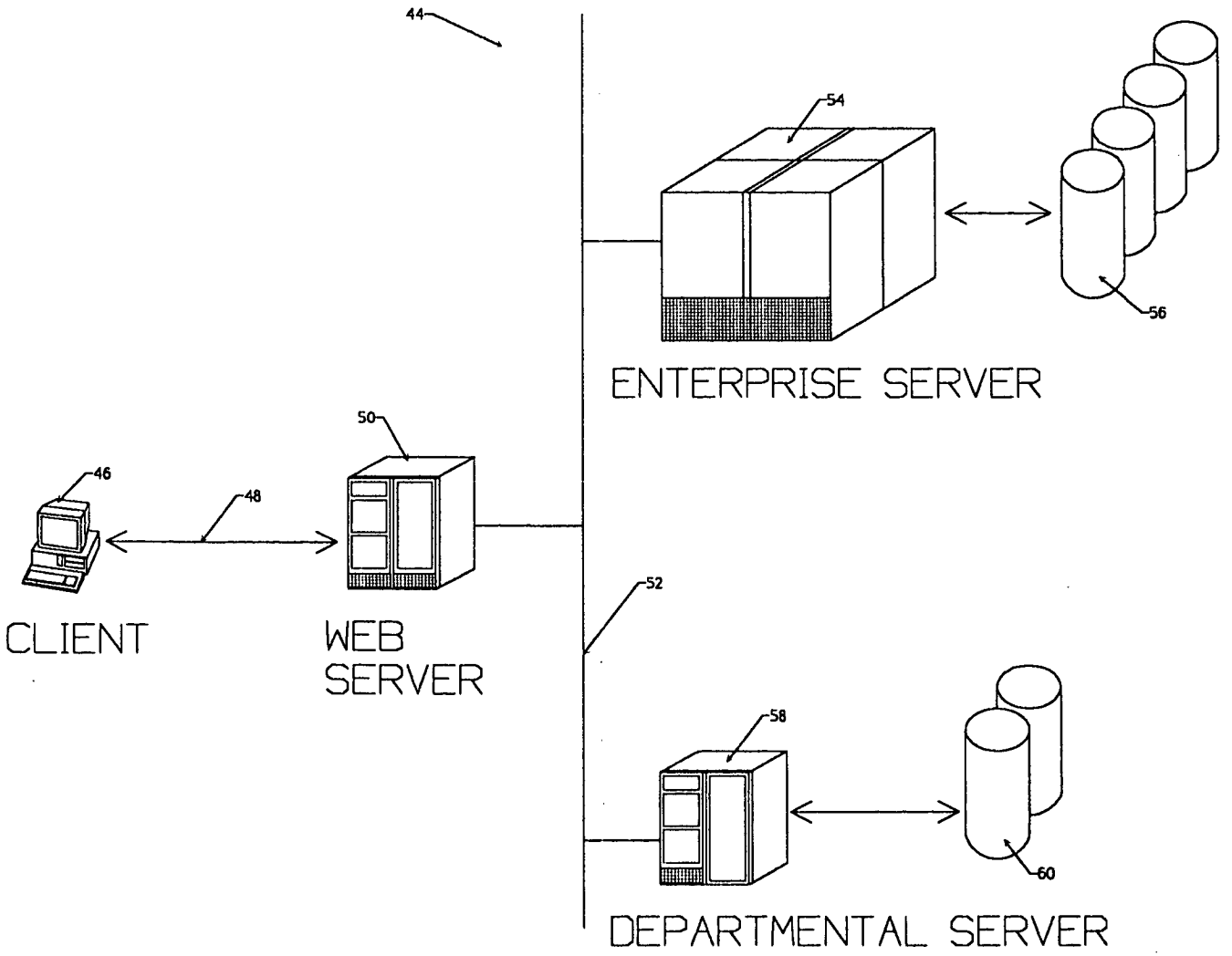
44
54
56
ENTERPRISE SERVER
50
46
48
CLIENT
WEB
SERVER
52
58
60
DEPARTMENTAL SERVER

FIG. 3

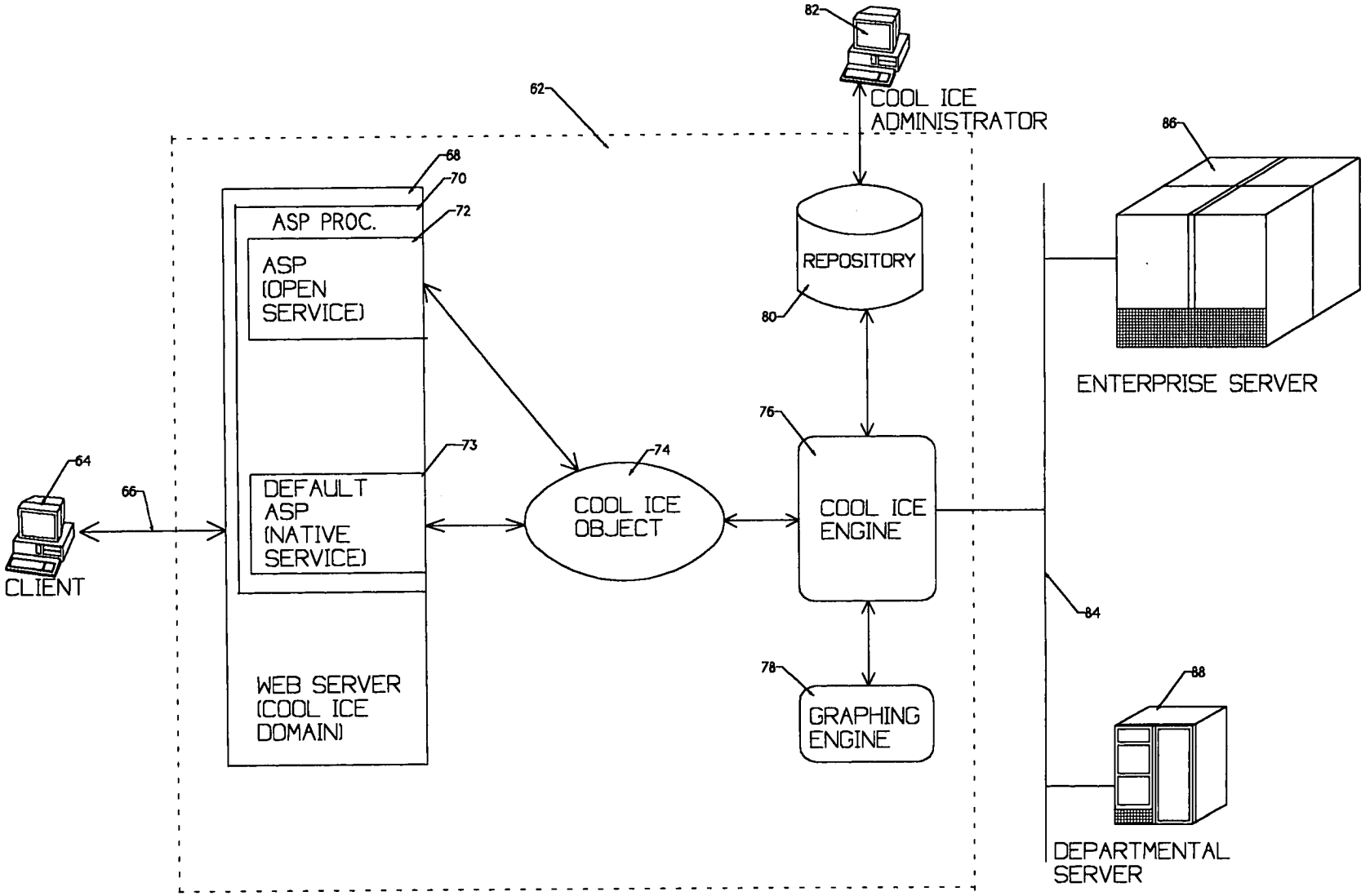
82
COOL ICE ADMINISTRATOR
62
68
70
72
ASP PROC.
ASP (OPEN SERVICE)
REPOSITORY
80
86
ENTERPRISE SERVER
76
73
74
64
66
DEFAULT ASP (NATIVE SERVICE)
COOL ICE OBJECT
COOL ICE ENGINE
CLIENT
84
78
GRAPHING ENGINE
88
WEB SERVER (COOL ICE DOMAIN)
DEPARTMENTAL SERVER

FIG. 4

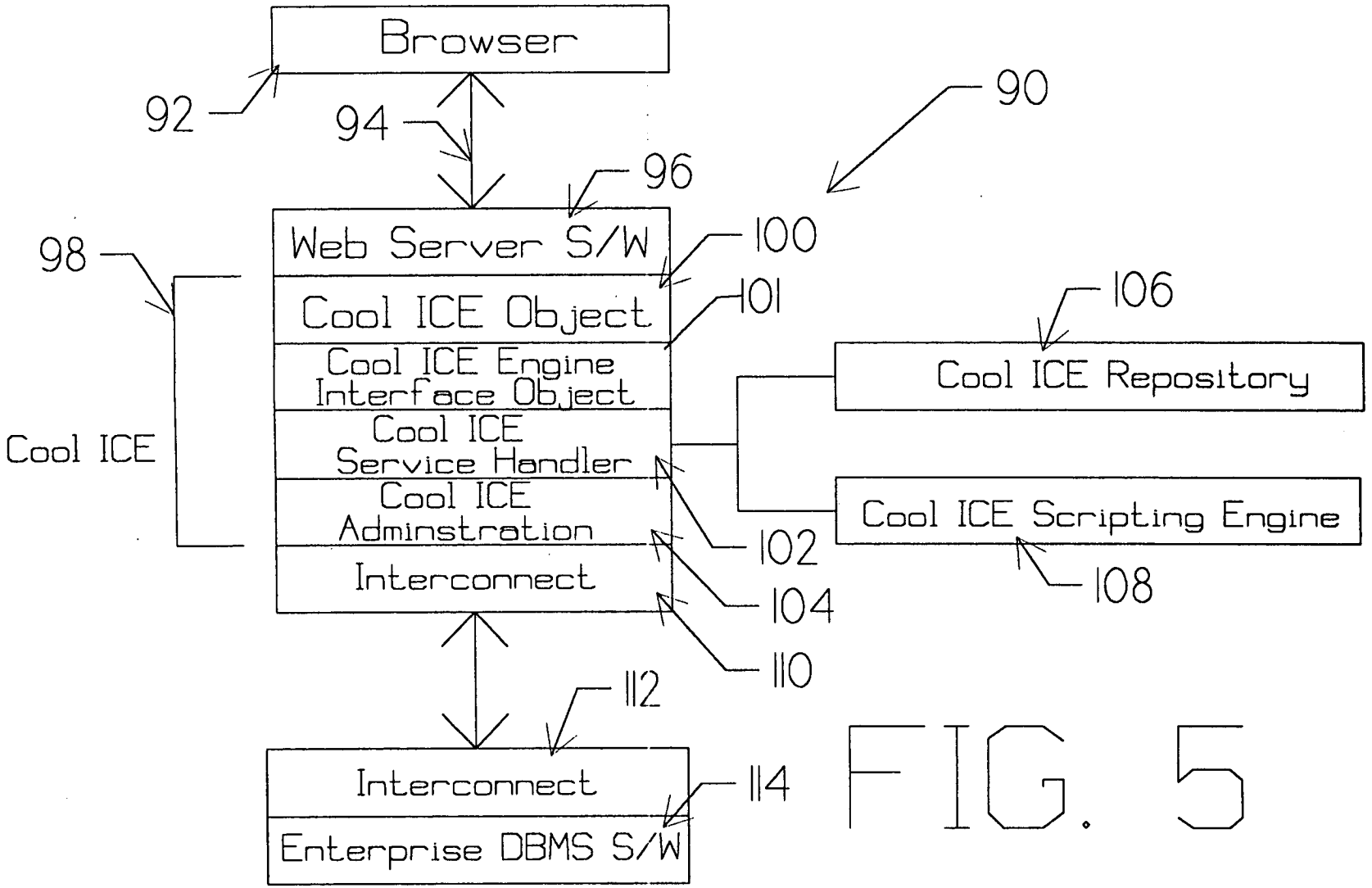
Browser
92
94
90
96
Web Server S/W
100
98
Cool ICE Object
101
106
Cool ICE Engine Interface Object
Cool ICE Repository
Cool ICE
Cool ICE Service Handler
Cool ICE Adminstration
Cool ICE Scripting Engine
102
Interconnect
104
108
110
112
Interconnect
114
Enterprise DBMS S/W

FIG. 5

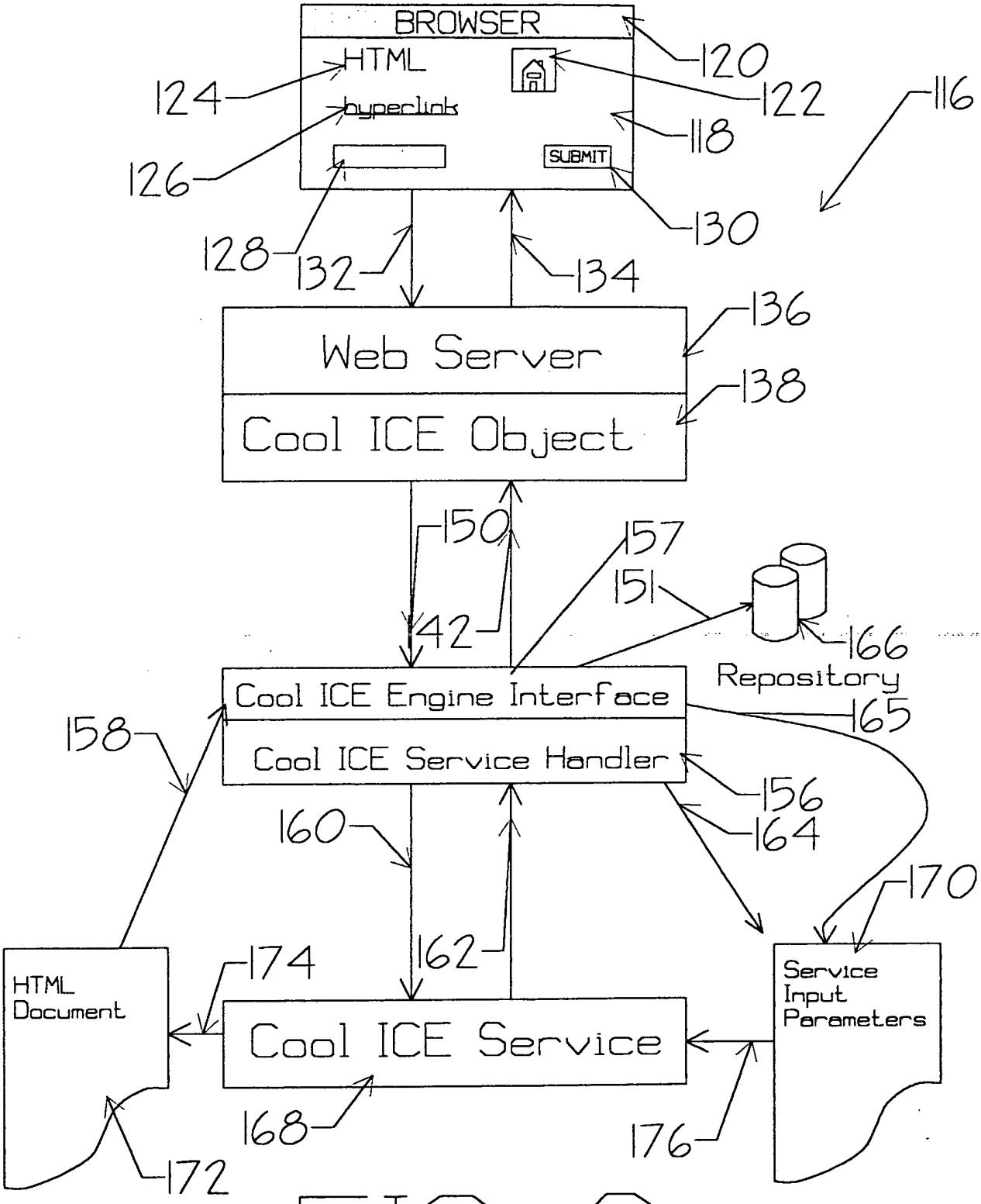
BROWSER
HTML
hyperlink
SUBMIT
120
122
124
126
116
118
128
130
132
134
Web Server
136
Cool ICE Object
138
150
157
151
42
166
Repository
Cool ICE Engine Interface
165
158
Cool ICE Service Handler
156
160
164
170
162
HTML Document
174
Service Input Parameters
Cool ICE Service
168
176
172

FIG. 6

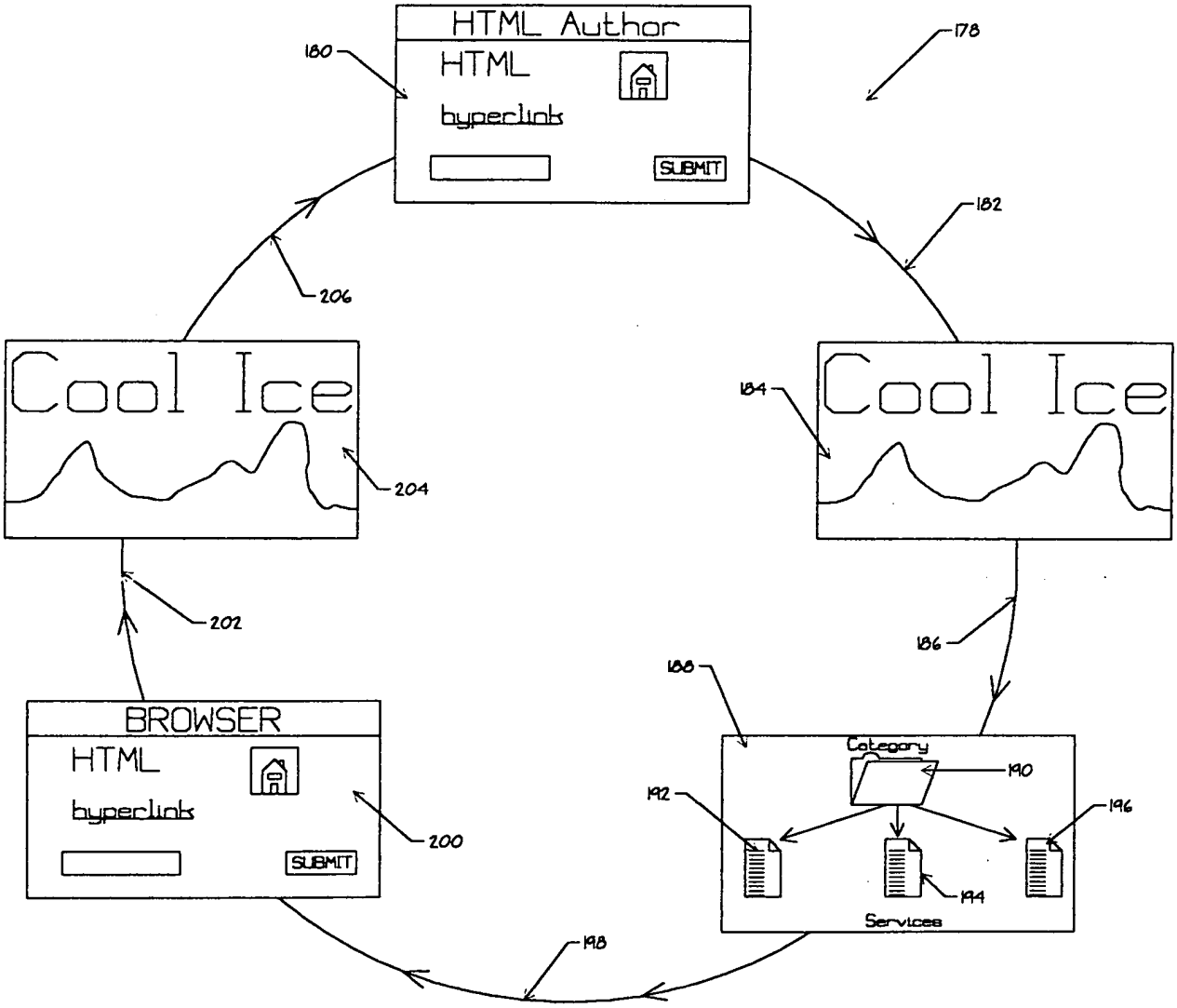
HTML Author
HTML
hyperlink
SUBMIT
180
178
182
206
Cool Ice
204
184
Cool Ice
202
186
188
BROWSER
HTML
hyperlink
SUBMIT
200
Category
190
192
196
194
Services
198

FIG. 7

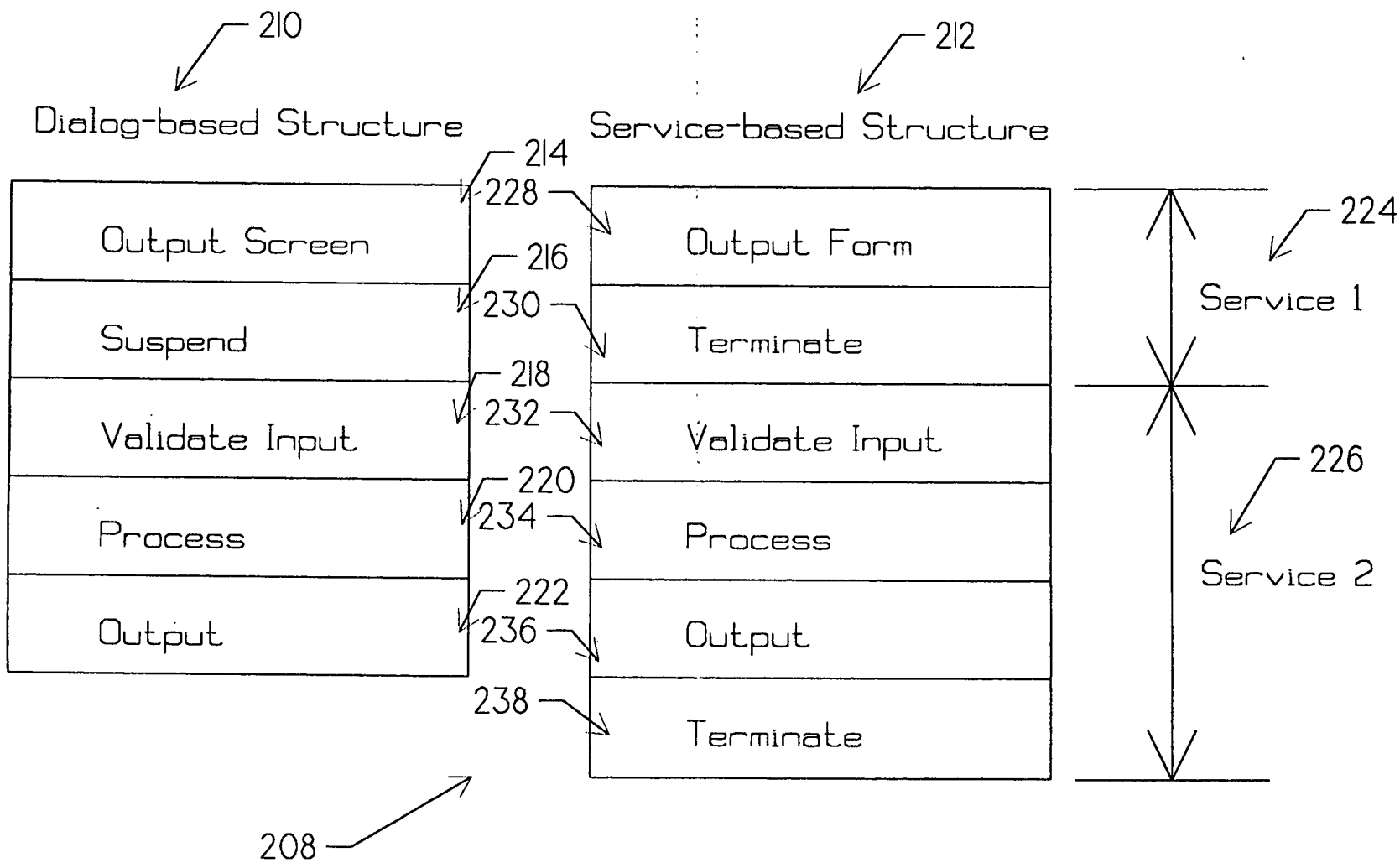
210
Dialog-based Structure
212
Service-based Structure
214
228
Output Screen
Output Form
216
230
Suspend
Terminate
218
232
Validate Input
Validate Input
220
234
Process
Process
222
236
Output
Output
238
Terminate
224
Service 1
226
Service 2
208

FIG. 8

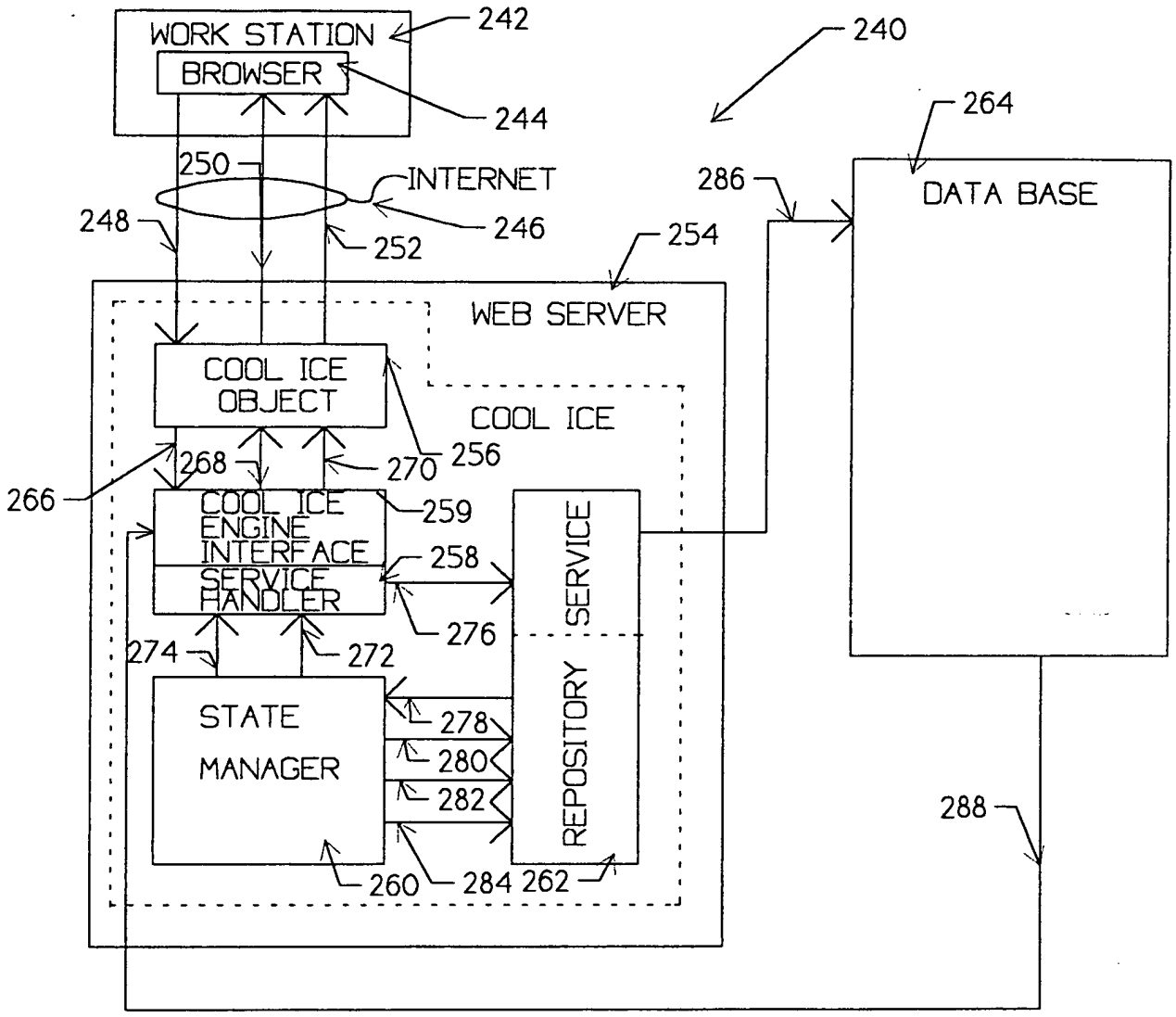
WORK STATION
BROWSER
242
244
240
264
250
INTERNET
286
DATA BASE
248
246
252
254
WEB SERVER
COOL ICE OBJECT
COOL ICE
256
268
270
266
COOL ICE ENGINE INTERFACE
259
SERVICE HANDLER
258
276
SERVICE
274
272
STATE MANAGER
278
280
282
REPOSITORY
288
260
284
262

FIG. 9

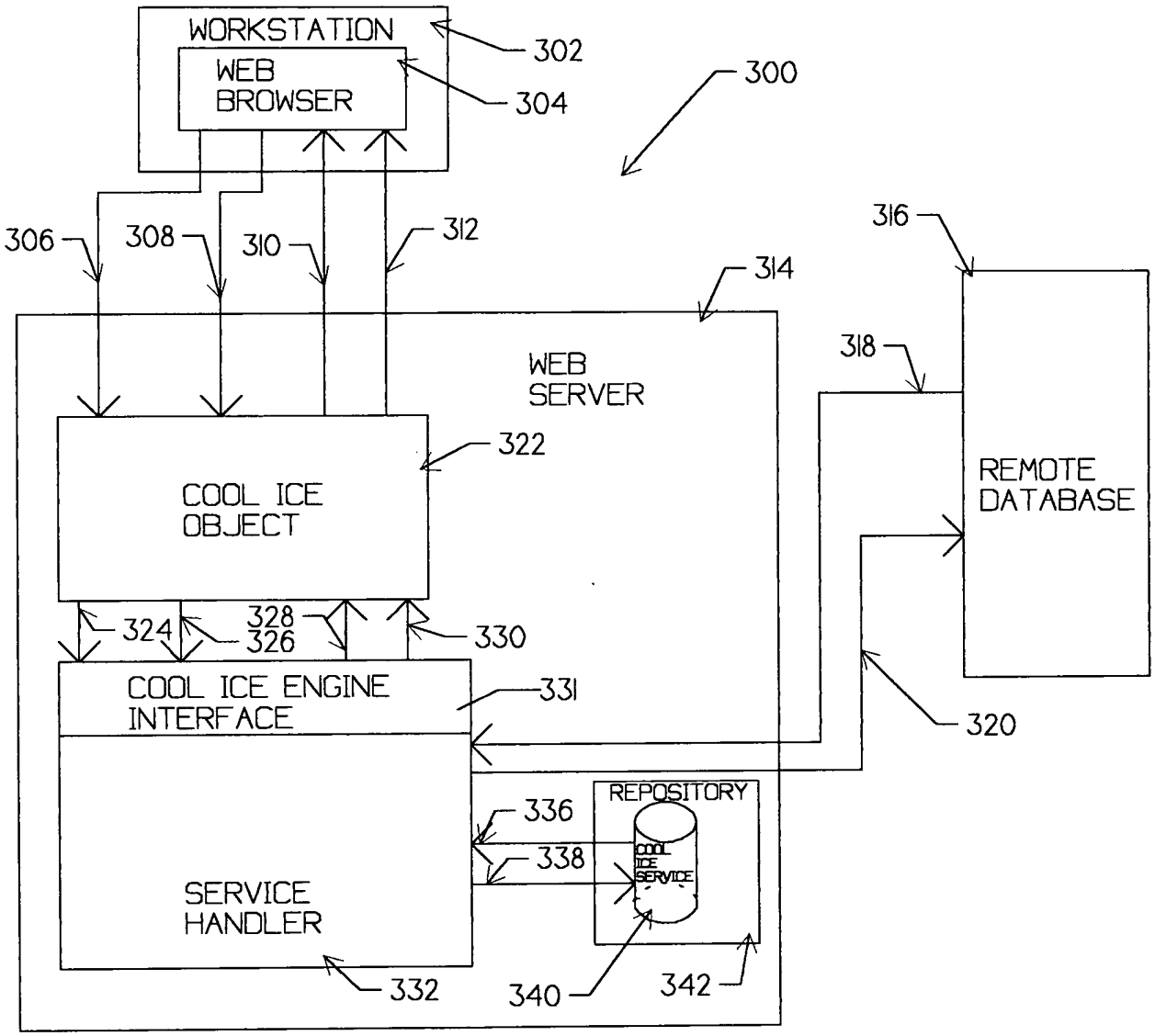
WORKSTATION
WEB BROWSER
302
304
300
306
308
310
312
316
314
318
WEB SERVER
322
COOL ICE OBJECT
REMOTE DATABASE
324
328
326
330
COOL ICE ENGINE INTERFACE
331
320
REPOSITORY
336
338
COOL ICE SERVICE
SERVICE HANDLER
332
340
342

FIG. 10

6h2TT"hSTBhh60

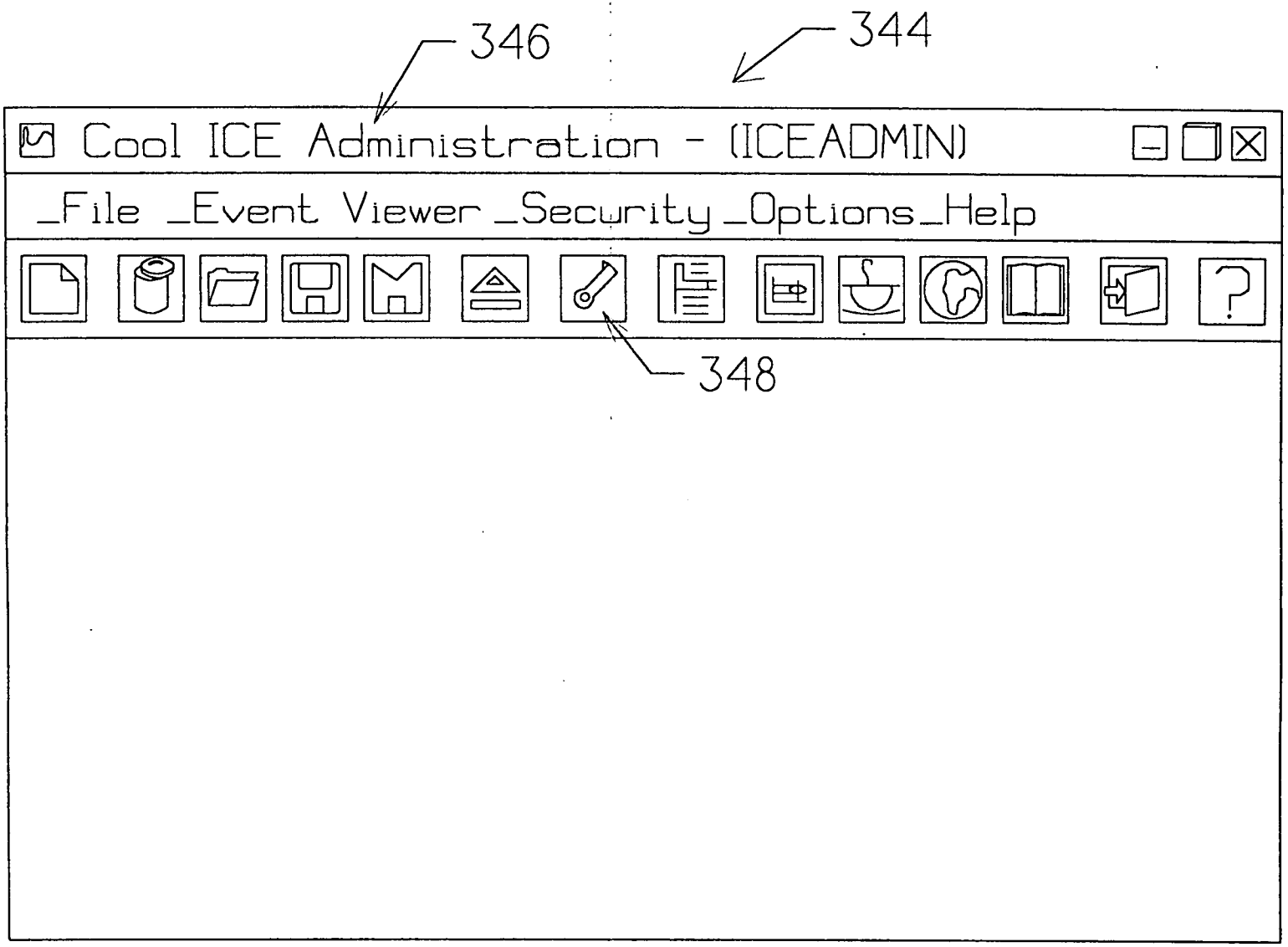

FIG. 11

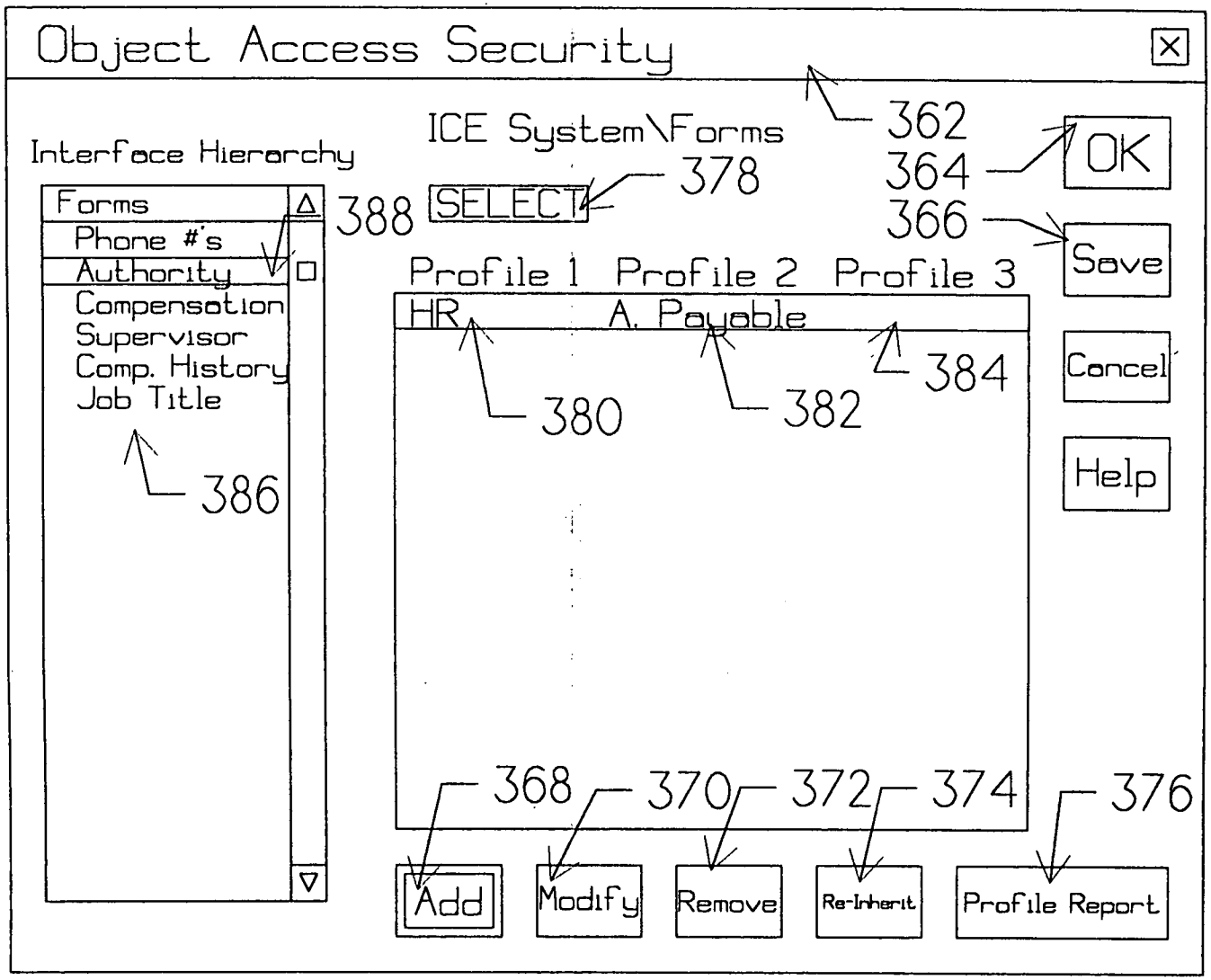
Object Access Security
ICE System\Forms
362
Interface Hierarchy
Forms
Phone #'s
Authority
Compensation
Supervisor
Comp. History
Job Title
386
388
SELECT
378
364
OK
366
Save
Profile 1
Profile 2
Profile 3
HR
A. Payable
380
382
384
Cancel
Help
368
370
372
374
376
Add
Modify
Remove
Re-Inherit
Profile Report
360

FIG. 12

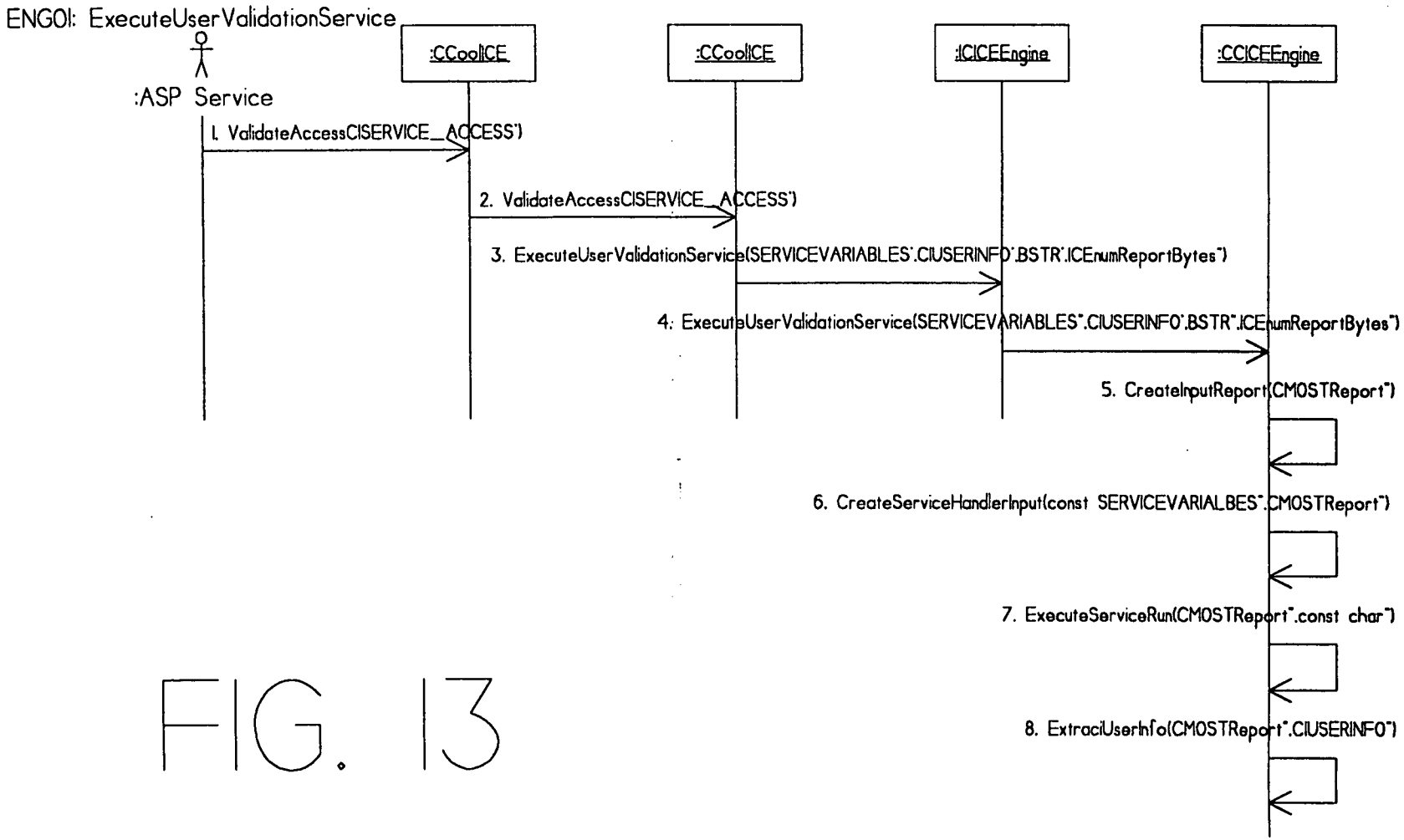
ENG01: ExecuteUserValidationService
:ASP Service
:CCoolICE
:CCoolICE
:ICICEEngine
:CCICEEngine
1. ValidateAccessCISERVICE_ACCESS")
2. ValidateAccessCISERVICE_ACCESS")
3. ExecuteUserValidationService(SERVICEVARIABLES".CIUSERINFO".BSTR".ICEnumReportBytes")
4. ExecuteUserValidationService(SERVICEVARIABLES".CIUSERINFO".BSTR".ICEnumReportBytes")
5. CreateInputReport(CMOSTReport")
6. CreateServiceHandlerInput(const SERVICEVARIALBES".CMOSTReport")
7. ExecuteServiceRun(CMOSTReport".const char")
8. ExtraciUserInfo(CMOSTReport".CIUSERINFO")

FIG. 13

MESSAGE #	DESCRIPTION
1.	The ASP calls the ValidateAccess method to determine the access privileges of the current user.
2.	The ValidateAccess method determines that a user SignOn is required. and the input from the SignOn form is available. When site specific user validation is used. the SignOn form must contain a hidden field with the name "UserValInputForm". When a form with the field name "UserValInputForm" is found. the ExecuteUserValidationService method is called to convert the site specific validation input to a valid userID/department/password.
3.	Call ExecuteUserValidationService to translate the site specific validation input to a valid userID/department/password. The translated data is returned in a CIUSERINFO structure.
4.	This method is called to execute the site specific User Validation service.
5.	Create the service input report.
6.	Populate the input report with the web server variables and form input fields.
7.	Execute the User validation service.
8.	Extract the userID/department/password from the output report generated by the User Validation service. The data is returned in the CIUSERINFO structure.

FIG. 14